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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/650,738	08/30/2000	Osamu Itokawa	35.C14752	2440
5514	7590	06/16/2004	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			CHANG, JON CARLTON	
			ART UNIT	PAPER NUMBER
			2623	

DATE MAILED: 06/16/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/650,738

Applicant(s)

ITOKAWA, OSAMU

Examiner

Jon Chang

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 12, 2004 has been entered.

Response to Applicant's Amendment and Arguments

2. The amendment filed April 14, 2004, has been entered and made of record.

Applicant's arguments, see pages 8-9, filed April 14, 2004, with respect to the rejection(s) of amended claim(s) 1, 19 and 20 under 35 U.S.C. 103(a) as being unpatentable over Chan in view of Chang or Giachetti have been fully considered. Applicant argues that the feature of "judging a border block in accordance with a frequency of occurrence of a motion vector detected for each block" is not disclosed in Chan et al. This feature was and still is essentially recited in claim 2. While the Examiner agrees, it is noted the the Examiner has never stated that this feature is taught by Chan et al. (as the feature pertains to claim 2, since Chan was never applied in a rejection of claim 2). The rejection on this ground has been withdrawn.

Applicant's arguments on pages 8-9, with respect to the rejection(s) of amended claim(s) 1, 19 and 20 under 35 U.S.C. 103(a) as being unpatentable over Kobayashi in view of either Chang or Giachetti, have been fully considered, but are not deemed to be

persuasive for at least the following reasons. Applicant argues (pages 8-9) that the feature of "judging a border block in accordance with a frequency of occurrence of a motion vector detected for each block" is not disclosed Kobayashi et al. As discussed in the Final Office Action with respect to claim 2, Kobayashi et al. discloses this feature at column 9, lines 34-40.

Claim Objections

3. Claim 7 is objected to because of the following informalities:

In claim 7, at line 3-4, "a first more largest occurrence frequency" is not grammatically correct.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 19 and 20 recite, "the border block including an object area and a background area corresponding to the background of the object area." This is not supported in the original disclosure. In fact, this contradicts the original disclosure. For example, on page 4, lines 24-25 of the specification read, "the border block forming a

boundary area **between** an object area and a background area corresponding to a background of the object area.” (emphasis added). If the border block is between two things, it cannot include those two things. Further, as seen in Fig.8, the border blocks are between the background blocks and the foreground blocks, but the border blocks do not include the foreground blocks and the background blocks.

5. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11, at lines 2 and 3, “the second block” is ambiguous because the claim refers to more than one block.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,343,097 to Kobayashi et al. (hereinafter “Kobayashi”), in view of either of the following two references: U.S. Patent 5,999,651 to Chang et al. (hereinafter

"Chang"), or the article entitled, "Dynamic Segmentation of Traffic Scenes" by Giachetti et al. (hereinafter "Giachetti").

As to claim 1, Kobayashi discloses an image processing apparatus, comprising:

- a) input means for inputting consecutive image data (Fig.3, "Picture Signal Input");
- b) dividing means for dividing the image data into blocks each constituted of a plurality of pixels (Fig.3, element 308; column 9, lines 21-22);
- c) detecting means for detecting a motion vector of each block (column 9, lines 21-22);
- d) judging means for judging a border block in accordance with an occurrence frequency of the motion vector detected by said detecting means (column 9, lines 34-40), the border block forming a boundary area between an object area and a background area corresponding to a background of the object area (column 10, lines 33-38; Fig.8B); and
- e) extracting means for extracting image data in the object area in accordance with the border block judged by said judging means (column 10, lines 51-52).

With regard to the extracting means, Kobayashi does not disclose setting an initial contour of the object area on the basis of the border block judged in the judging step, and extracting the object area using the set initial contour and an active outline model. However, Chang teaches setting an initial contour of an object area (column 9, lines 43-50), and extracting the object area using the set initial contour and an active outline model (column 10, lines 33-42; the snake is an active contour, and the object

area is extracted in the tracking). Based on the disclosure of Chang, it is clear that Chang's teaching would improve object area extraction. Therefore, it would have been obvious to one of ordinary skill in the art to modify Kobayashi's apparatus according to Chang.

Additionally, Giachetti teaches setting an initial contour (section 3, first paragraph), and extracting the object area using the set initial contour and an active contour model (section 3.3). Giachetti states that the technique allows a fast and sufficiently precise detection of moving objects (abstract). Therefore, it would have been obvious to one of ordinary skill in the art to modify Kobayashi's apparatus according to Giachetti.

Regarding claim 3, Kobayashi discloses an apparatus according to claim 2, wherein said judging means classifies blocks into the border block, an object block corresponding to the object area, and a background block corresponding to the background area (In column 9, lines 34-40, Kobayashi categorizes the codes with the three highest frequencies as having a moving portion. This includes the moving portion, i.e., the object area, as well as the contour, i.e., border, of the object, e.g., column 10, lines 33-38. The other category is "other frequencies," column 9, lines 38-39, which since it does not correspond to moving portions, must be background.).

With regards to claim 15, Kobayashi discloses an apparatus according to claim 3, further comprising encoding means for encoding the image data in the object area extracted by said extracting means (column 5, lines 38-41).

Regarding claim 16, Kobayashi discloses an apparatus according to claim 15, wherein said encoding means encodes the image data in the background area (column 5, lines 38-39; the picture data is encoded; the picture data includes the background area).

In regards to claim 18, Kobayashi discloses an apparatus according to claim 15, further comprising recording means for recording the image data encoded by said encoding means in a storage medium (column 6, lines 36-40).

Claim 19 is drawn to a method which corresponds to claim 1. The discussion provided above for claim 1 is applicable to claim 19.

As to claim 17, Kobayashi does not disclose a transmitting means for transmitting the image data encoded by said encoding means. However, the Examiner takes Official Notice that encoding means are extremely well known in the art. Kobayashi's system is intended for outputting of encoded NTSC signals (Fig.2, elements 117, 118 and 119). NTSC signals are typically transmitted, as is well known. Therefore, it would have been obvious to one of ordinary skill in the art employ a transmitting means in Kobayashi's system.

Claim 20 is drawn to a storage medium storing program codes for image processing steps which correspond to the steps of claim 19. Kobayashi does not explicitly mention the storage medium and program codes. However, the Examiner takes Official Notice that it is known to perform motion compensation and encoding processes using computer-based systems. It would have been obvious to implement Kobayashi's method in a computer-based system because this would provide greater

flexibility, and, given the wide availability and low cost of computers, would have been more economical in some applications. It therefore would have been obvious to one of ordinary skill in the art to implement Kobayashi's method in a computer-based system. Such a system would inherently have the storage medium and program codes.

Subject Matter Not Found in the Prior Art

8. The subject matter of claims 4-14 has not been found in the prior art. Allowability cannot be indicated in view of the rejection under 35 U.S.C. § 112, 1st paragraph.

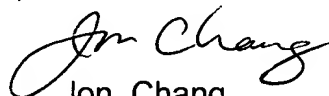
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon Chang whose telephone number is (703)305-8439. The examiner can normally be reached on M-F 8:00 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jon Chang
Primary Examiner
Art Unit 2623

Jon Chang
June 12, 2004